

ABSTRACT OF THE DISCLOSURE

An Ethernet communications redundancy system provides network access redundancy and end-to-end error detection and recovery, useful to Industrial control applications as well as other types of applications. In embodiments of the invention, an additional data link driver is provided between the network stack and the IEEE 802.3 MAC PHY. Internet Protocol or proprietary applications will still run without modification or enhancement since the additional layer is not exposed as such to higher layers. Embodiments of the invention allow the use of commercial off the shelf (COTS) protocol stacks (e.g. IP, Ethernet) and are independent of any employed network redundancy.